

General information	
Academic subject	<i>Fossils and paleoenvironmental reconstruction</i>
Degree course	Bachelor's degree L/32
Academic Year	3 year
European Credit Transfer and Accumulation System (ECTS)	2
Language	<i>Italian</i>
Academic calendar (starting and ending date)	<i>March-june 2022</i>
Attendance	

Professor/ Lecturer	
Name and Surname	Angela Girone
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Department and address	<i>Dipartimento di Scienze della Terra e Geoambientali via E. Orabona, 4 Bari</i>
Virtual headquarters	<i>Dipartimento di Scienze della Terra e Geoambientali via E. Orabona, 4 Bari</i>
Tutoring (time and day)	wednesday 9-13

Syllabus	
Learning Objectives	Acquiring expertise in the application of quantitative methods in paleontology with main regards to paleoenvironment and paleoclimate reconstruction
Course prerequisites	Zoology, geology, mineralogy, paleontology
Contents	Introduction on elements of micro and macro paleontology and taphonomic processes Sampling and preparation techniques in invertebrate paleontology for paleontological studies. Analysis and description of the fossil content observed in washed sediments and thin sections under the microscope Sampling and preparation techniques in vertebrate paleontology for paleontological studies with practical exercise in museum. Key fossil group for paleoenvironmentale and paleoclimate reconstruction: examples Trace fossils and paleo-ethology: study case on dinosaur tracks.
Books and bibliography	MANUALE di PALEONTOLOGIA FONDAMENTI – APPLICAZIONI. Edizioni Idelson Gnocchi 1908 Srl, aprile 2020. 472 pp. ISBN: 9788879477147 teachers' notes
Additional materials	lecture notes.

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
	32		20
ECTS			
4		4	

Teaching strategy	<i>Inquiry-based learning</i>
Expected learning outcomes	
Knowledge and understanding on:	The student will have to know the different sampling, preparation and data collection methods specific for the different applications. He will have to demonstrate that he has learned the main methods of analysis in the main fields of application of fossiliferous associations in paleoenvironmental reconstructions
Applying knowledge and understanding on:	develop the ability to use the knowledge acquired in order to solve simple problems concerning the different methods of sampling, preparation and data collection aimed at studying different fossil associations and different applications
Soft skills	<ul style="list-style-type: none"> • <i>Making informed judgments and choices</i> Acquiring skills in discriminating between different options <i>Communicating knowledge and understanding</i> Strengthening the ability to explain clearly the applied methods, main results and data interpretations for the solution of different case studies <i>Capacities to continue learning</i> Developing the attitude of personal learning, based on appropriate descriptions, investigation tools, quantitative analyses and data interpretation. Favoring the self-sufficient skills for capturing relations among different geological subjects.

Assessment and feedback	
Methods of assessment	Final oral test
Evaluation criteria	<ul style="list-style-type: none"> • <i>Knowledge and understanding</i> Students will be required to manage the basic principles for the use of fossils in paleoenvironmental reconstruction and to be confident with the selection of the more appropriate method for paleontological data analysis • <i>Applying knowledge and understanding</i> Students will be required to manage the main tools for paleontological data acquisition and interpretation • <i>Autonomy of judgment</i> In addition to ascertaining the acquisition of the concepts, the ability to connect the acquired knowledge with other naturalistic disciplines, both abiotic and biotic, is evaluated. • <i>Communicating knowledge and understanding</i> For positive evaluation, the students will have to demonstrate the critical acquisition of the acquired notions. • <i>Communication skills</i> <i>The mastery of the scientific vocabulary, the clarity and simplicity of exposure essential elements for teaching and scientific dissemination will be assessed very positively.</i> • <i>Capacities to continue learning</i> Critical ability
Criteria for assessment and attribution of the final mark	The highest grade is achieved by showing reasoning skills and appropriate scientific language. The evaluation will be negative if the student shows that he learned the notions using wrong terms.
Additional information	



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